



# Agri-News

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## **Grazing and Pasture Plans Help Producers Prepare for a Dry Season**

Previous experience has highlighted the need for livestock producers in Western Canada to have preparedness plans in place in the event of drier than normal summers.

“It’s important to prepare a grazing plan that matches the estimated forage production to the animal numbers, and takes into consideration rest periods to allow plant recovery between grazings and the timing of forage growth patterns,” says Grant Lastiwka, forage, grazing and beef specialist with Alberta Agriculture and Rural Development, Olds. “Producers need to calculate what forage resources they have, what they can expect to grow and what is needed for their grazing year.”

Producers should make a list of their pastures, the pasture size and estimated yield per acre. Multiply this out to get the yield/pasture. For example: 10 pastures that are 50 acres each and have an estimated yield of 2000 pounds per acre equals a pasture yield of 100,000 lbs per pasture for a total projected yield of 1,000,000 lbs.

Pick a realistic date when the cows go to pasture (for example June 2 at day 153) and when you think the grazing season will end (October 30 - day 303). This means that 150 days of grazing are estimated. If this makes sense, calculations can continue, if not, adjust and recalculate. Take the total number of cow/calf pairs e.g. (150) and multiply by the daily forage consumed by each cow (about 2.5 per cent of body weight) and multiply this by the number of pairs to get the intake/day. Then multiply that number by the days of grazing and an estimate of needed forage can be determined. For example, if a producer has 150 cow/calf pairs and the average daily forage consumption is 45 lbs per pair (including 10 lbs as ungrazed residue) this means there is a daily need for 6750 lbs of forage. If that daily need is then multiplied by the 150 grazing days, the total forage need is 1,012,500 lbs.

In the first 10 pasture calculation, there was 1,000,000 lbs. of projected yield. Since this is about equal to the estimated needs of 1,012,500 lbs., the projections for forage and animals are well matched.

“Further planning takes into consideration rest periods,” says Lastiwka. “To calculate this, take the number of pastures

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## **This Week**

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(in this example there are 10) and the number of herds (in this case one). Estimate a conservative rest period between grazings for plants to recover; for example, 60 days. This 60 days of rest divided by 9 (10 minus the pasture the herd is in) gives a grazing period of six to seven days per pasture. If the animals are left in each pasture for six to seven days, it will be at least 60 days before a pasture is regrazed. It is also important to consider the timing of the growth or growth pattern over the season.”

If animal carrying capacity and pasture rest periods are in balance, it's time to look at the water situation. If short of water, it may be necessary to fence cattle out of the surface water sources and look into other water delivery systems.

When pasture and animals cannot be matched consider forage and animal options. Forage options are: greater grazing control, fertilizing, seeding annuals, renting pasture, extending the winter feeding period, supplementing on pasture or sacrificing certain pastures. Cattle options are: grouping herds, selling open cows and yearlings, weaning early, culling cows, selling less productive cows or leasing out cows.

“Consider both the short and long-term grazing goals along with family and business goals,” says Lastiwka. “Communicate concerns and possible alternatives to the people who have an effect on the outcome of these goals occurring. Function as a team to give feedback or carry out the needed actions. Communication is important to relieve stress and create success when facing a difficult situation, such as a drought year.”

Look at the cash flow plan. “Pencil out” various alternatives and corresponding action dates. As a team, rank each possibility so that cool-headed decisions can be made in advance and acted on quickly in the “heat” of a drought. Tie actions to key dates so that changes can be made far enough in advance if moisture conditions become poor or critical. Cut expenses before they occur and monitor cash flow monthly. If supplemental feed is accepted as an option (economically this is often too costly) make sure it is when it gives the best returns on its cost. . . . that is in early spring before pastures are overgrazed and the damage is done.

Drought, grazing and financial planning do not stop here as planning actions, monitoring results, controlling to stay on target and replanning-as-needed are a continual process for success.

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## **Alberta Beekeeping Growing Forward: Developing a Monitoring System and Control Options for Honey Bee Pests**

Honey bees are the most valuable managed pollinator of crops. The value of pollination activities accounts for one third of the food produced in Western countries. Alberta is the largest honey-producing province in Canada. With over 235,000 bee colonies in 2008, the province has one third of Canada's bee colonies. The value of farm cash receipts from honey production and pollination rental fees ranges from \$40 to \$57.5 million per year.

In addition, the estimated contribution of honey bees to Alberta's crop industry production (canola, forage crops, clover, small fruits, etc.) through pollination is \$350 million per year. Beekeepers rent over 80,000 honey bee colonies per year for the pollination of hybrid canola in southern Alberta. These rented bee colonies used for pollinating hybrid canola in Alberta represent the largest number of colonies moved for pollinating a single crop in Canada.

“Alberta beekeepers experienced high winter losses (30 per cent per year) in 2007 and in 2008,” says Medhat Nasr, provincial apiculturist with Alberta Agriculture and Rural Development, Edmonton. “Preliminary reports for 2009 indicate that honey bee winter losses once again average approximately 28 per cent, ranging from 5 to 70 per cent. These reported high winterkill decreased the number of bee colonies in Alberta by 15 per cent in 2008 from the number of colonies reported in 2006. Honey production was also down by 25 per cent in Alberta (Statistics Canada 2008). The estimated cost of losses to beekeepers was up to \$25 million per year.

“These reported losses suggest that the entire beekeeping industry, including commercial beekeeping operations in Alberta, is at high risk. Failing to control Varroa mites and the newly discovered fungal disease, *Nosema ceranae*, will continue to significantly increase the risks of high annual losses of honey bee colonies in Alberta. Therefore, a completely new approach to improve capabilities of beekeepers to manage risk is required.”

In response to the unfolding bee health calamity, Alberta Agriculture and Rural Development has taken the lead in a partnership with the Alberta Beekeepers Commission, the hybrid canola seed production companies, the Southern Alberta Beekeepers Association and private commercial beekeeping operations to address this concern. A research proposal was developed with the overall goal of developing a new applied approach that involves:

- developing a bee pest monitoring system that can predict population outbreaks of known pests and provide an early warning to beekeepers for treatment

- offering viable effective control options to beekeepers
- establishing an outreach education program to facilitate the implementation of the developed monitoring system in Alberta beekeeping management programs

Alberta Crop Industry Development Fund (ACIDF) has agreed to financially support this proposal for the next three years based on matching funds from all industry partners. This new initiative will provide beekeepers with current information on seasonal abundances and distributions of Varroa mites and Nosema across Alberta. Beekeepers will have the ability to forecast outbreaks and treatment times for pests on honey bees. Miticides with new mode of actions and optimization of miticides used to control Varroa mites will be developed based on integrated pest management practices. A comprehensive outreach educational program with on-farm demonstrations to illustrate the developed management system will be carried out.

“Anticipated results of the project will enable Alberta beekeepers to reduce the annual colony losses to 10 to 15 per cent,” says Nasr. “The beekeeping industry could save approximately \$15 to \$20 million per year in the replacement of dead colonies and loss of production. Beekeepers’ profits will improve and they will be able to reinvest in growing their businesses. Improving pest management practices will enhance the consumers’ confidence in the quality of Alberta honey. Moreover, hybrid canola growers and other growers using honey bees for pollination will be able to secure enough healthy bee supplies for pollinating their crops. Thus, these growers will be able to make additional revenues (approximately \$50 million) from improved seed production.”

The financial support for this project provided by Alberta Crop Industry Development Fund (ACIDF), Alberta Agriculture and Rural Development, Alberta Beekeepers Commission, Bayer CropScience, Pioneer Hybrid, Southern Alberta Beekeepers Association Poelman Apiaries Ltd and Greidanus Honey Mill is acknowledged and appreciated. Commercial beekeepers will be contacted to participate in this program. For more details, contact Medhat Nasr at 780-415-2314 or e-mail [medhat.nasr@gov.ab.ca](mailto:medhat.nasr@gov.ab.ca)

For further information on beekeeping and winterkill, visit Alberta Agriculture’s website at [www.agriculture.alberta.ca/](http://www.agriculture.alberta.ca/) publications for fact sheets *Beekeeping for Beginners* and *Honey Bees and Winterkill 2007*.

The Alberta Agriculture and Rural Development book *Beekeeping in Western Canada* is also available for purchase for \$25 plus GST and shipping and handling. It can be ordered online or by calling the Alberta Agriculture Publications Office toll-free at 1-800-292-5697.

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## ***It’s Never Too Early to Think about Making Hay***

Hay is the most common source of stored feed used on livestock operations. It is also one of the most versatile stored feeds because:

- it can be stored for long periods of time with minimal nutrient loss
- there are a wide range of plant species that can be harvested as hay
- it can be produced and fed in large or small amounts
- it can supply the majority of the nutrients required by many different classes of livestock

“Understanding the factors that affect hay quality is vital to ensure quality hay in the quantity desired is produced,” says Stephanie Kosinski with Alberta Agriculture and Rural Development, Stettler. “High quality hay can be thought of as hay that is palatable, highly digestible, with sufficient nutrients to meet the dietary needs of the livestock it is being fed to. Factors that determine hay quality include: stage of maturity when harvested, plant species, harvest management, weather, moisture content, and storage conditions. Of these, stage of maturity at harvest is one of the most important factors affecting hay quality.”

As forage crops mature, their quality decreases. Fibre levels increase as grasses head out and as legumes flower, while crude protein, digestibility and palatability decline. Harvesting mature forages will result in lower quality hay that may not meet the needs of livestock during the winter. However, cutting to optimize quality can come at the expense of yield. For example, the quality of an alfalfa hay crop is highest just before flowering. At this stage, though, yield hasn’t been maximized. For many grasses, maximum quality is reached before flowering begins, but maximum yield occurs at, or just after, the bloom stage. Producers need to find the balance between quality and yield when cutting forage crops for hay.

“Forage species also has a large impact on hay quality,” says Kosinski. “In general, legumes are higher in quality than grasses. Legumes tend to have lower fibre levels, higher crude protein levels, and increased digestibility. However, properly managed legume-grass mixtures and grass crops can produce high quality hay. The key factors are to cut at the optimal plant stage and minimize losses during harvesting and storage.”

Forage quality can be maintained during harvest by promoting rapid dry-down, maintaining a high leaf content and baling at the correct moisture. Plant cells continue to respire and use energy even when cut. Respiration stops once the material has reached a moisture content of 40 per cent. To avoid excess quality losses, manage hay to reach that 40 per cent moisture content as soon as possible.

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“Even though it is difficult to predict the weather, harvesting forage for hay is best done under warm, dry conditions,” says Kosinski. “This helps speed up the drying process and reduces the risk of losing quality. Rain on cut forages causes nutrients to leach out of the plant cells and increase dry matter losses. The longer the forage is wet and the more rain that washes through the cut hay, the higher the nutrient losses will be.”

When hay is baled, it should not be more than 12 to 18 per cent moisture (depending on shape and size of the bale, and humidity). If the bale is at a higher moisture level, large dry matter losses can occur due to heating and mould growth. Moulds consume nutrients and produce heat. Heating causes a browning reaction to occur that ties up amino acids and sugars into insoluble nitrogen compounds that are unavailable to animals. This increase in insoluble fibre leads to lower digestibility and reduced hay quality.

“The amount of storage losses in hay is related to both the moisture content during baling and the environmental conditions the hay is subjected to,” says Kosinski. “As stated earlier, hay baled at higher than the recommended moisture content will heat and experience mould growth, leading to losses in both dry matter and nutrient content. Bales stored inside will be protected from weathering due to precipitation.”

If a producer has to store bales outside, large quality and dry matter losses can be avoided by avoiding stacking bales, and by storing bales:

- on a well-drained area
- with space between bales for air circulation to facilitate drying
- away from tree line, fences, and buildings

“When managing for high quality hay, numerous factors need to be considered,” says Kosinski. “It never hurts to come up with a plan of action on how to achieve the hay quality and yield needed for an operation. The overall goal is to produce enough hay to meet the nutritional needs of your livestock over the winter.”

The ***Alberta Forage Manual***, produced by Alberta Agriculture and Rural Development, offers producers comprehensive information on a range of forage topics: adaptation, legumes and grasses, annuals, mixtures, establishment, fertility, pasture management, harvesting and rejuvenation. In addition, sections on forage pest insects and diseases present detailed discussion of these problems in forage crops, helping producers diagnose damage. The extensive descriptions of forage species and their growth habits will help in planning forage management programs. Fully illustrated with colour images, line drawings, tables, charts and graphs, this forage reference work provides a wealth of information. The manual is available for purchase for \$30 plus GST and shipping and

handling. It can be ordered online by visiting [www.agriculture.alberta.ca/publications](http://www.agriculture.alberta.ca/publications), or by calling the Alberta Agriculture Publications Office toll-free at 1-800-292-5697.

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## **Beef Producers Hope Cattle Insurance Offers Stability Amid Unstable Prices**

Unstable cattle prices have beef producers across the province eager to see the details of Alberta’s new Cattle Price Insurance Program (CPIP) set to be unveiled this summer.

“There’s a lot of uncertainty around cattle prices right now,” says provincial livestock risk management specialist Bruce Viney, explaining the weak economy is one key factor, with consumers favouring less expensive meat products like hamburger over steak. “Alberta beef producers have just experienced a series of severe price swings that sent finished cattle prices plummeting more than 10 per cent into the winter and then rebounding strongly this spring. Many producers have just finished filling their pens with high-priced feeder cattle. Now a major concern is whether those prices will hold strong or drop over the summer before the finished cattle are ready to sell.”

Cattle producers have few options when it comes to managing price risk. They’ve never had an effective tool to protect themselves against major drops in cattle prices on this side of the border. Grain farmers have crop insurance, but there’s never been insurance for livestock. CPIP will help fill a serious void in the risk management tools available,” explains Viney, who works with Alberta Agriculture and Rural Development (ARD). The first products under CPIP - an Alberta-only program - will cover finished cattle ready for slaughter. Work is underway to develop a product for feeder cattle.

With limited risk management options available, some Alberta cattle producers manage their price risk by signing forward delivery contracts with packers for their finished cattle. “It gives them a locked in price, but attractive contracts aren’t always available,” says Viney. “Other producers put themselves at the mercy of the markets, and simply take the price of the day.”

Some larger feedlot operators use financial instruments such as futures, options and forward contracts to hedge part of their price risk. Most small and mid-size producers don’t have the time or resources to devise futures market strategies. The big problem with these tools is that they are based on U.S. prices, and don’t always reflect what’s happening with Canadian cattle prices.

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“When Canadian prices drop unexpectedly and dramatically in relation to U.S. cattle prices, these U.S.-based tools leave producers unprotected and open to severe losses,” says Viney. “That’s what happened when BSE closed the border in 2003. Canadian cattle prices dropped to disaster levels while U.S. prices increased substantially.

“That sudden drop in Canadian cattle prices relative to U.S. prices is called basis risk. And until CPIP is launched, Alberta cattle producers have no way to protect themselves from it. It can be triggered by events like a drought, a major livestock disease outbreak in Canada, or other border issues. We’ve seen this recently with U.S. mandatory Country of Origin Labelling (COOL) which put considerable downward pressure on Canadian cattle prices this winter.”

“CPIP will give producers an Alberta price for their cattle that they can bank on - based on futures market trends. It will help protect them from unexpected drops in Canadian cattle prices that can put them out of business,” explains Susan Crump, with Agriculture Financial Services Corporation (AFSC). AFSC will administer CPIP in addition to the crop and hail insurance programs it already delivers.

“With CPIP, producers will know in advance the minimum price they’ll get for their cattle at slaughter, based on the coverage level they choose,” says Crump. “At the end of their insurance contract, if Alberta market prices are lower than their insured price, they’ll receive payment. Settlement prices will be based on an Alberta average price index calculated weekly. Producers can choose CPIP policies of 12 to 36 weeks.”

“There’s definitely a void in the market place for this kind of protection, and the timing is opportune,” says Rich Smith,

general manager of Alberta Beef Producers (ABP). ABP sponsored the initial research that led to CPIP, with funding from the federal government’s private sector risk management partnership. “Alberta cattle producers have just come through seven hard years - with drought, BSE, the rise of the Canadian dollar, high feed costs, and global financial collapse. Producers are accustomed to price volatility, but they are weary of major losses. Many say they’d consider paying a price to insure themselves against another severe loss.”

“CPIP premiums will be based on price volatility and market conditions,” says Viney. “Sometimes premiums will be cheap relative to market conditions, and sometimes they’ll look expensive. Like any insurance, it will cost less if you buy it before the risk becomes known and markets become volatile.

“If CPIP had been in place last fall, there would have been producers in significant claim positions already because of COOL. And, if they’d purchased coverage in September before prices tumbled, their premiums would have been fairly low.”

“CPIP will be actuarially-sound, with premiums paid entirely by producers, similar to hail insurance,” adds Crump.

The program is in its final stages of development. As the summer launch date approaches, full details about how CPIP works will be released, and cattle producers will be able to access coverage online or through their local AFSC office. As more information becomes available about the program, it will be posted at [www.afsc.ca](http://www.afsc.ca)

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## Agri-News Briefs

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### Export Finance

Agriculture and Food Exports has several fact sheets and information pieces posted to the Alberta Agriculture and Rural Development site that can be helpful to Albertans thinking of venturing into the export market. Fact sheets include information on export insurance, lending, investment, and project and research funding. There is also information on agencies and councils that offer funding and assistance. For more information, visit the Alberta Agriculture website at [www.agriculture.alberta.ca](http://www.agriculture.alberta.ca) and search *Export Finance*.

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### Acme Grazing School

The Acme Grazing School with Jim Bauer is being held at the Anchor JB Ranch in Acme, on July 15 and 16, 2009. This school is a hands-on interactive school where the pasture is the classroom! The school is designed to be of interest to beginners and experienced graziers. For more information, contact Grant Lastiwka, forage, grazing and beef specialist with Alberta Agriculture and Rural Development, Olds, at 403-556-4248, or JB Bauer at 403-546-2427, e-mail [jbbauer@airenet.com](mailto:jbbauer@airenet.com)